Compost Works:
Storm Water Management

Compost Works

Project Date:
November 2003

Organization:
City of Davenport

Location:
West Locust Street

Application Method:
One and a half-inch screened compost

Contact:
Tom Leabhart,
Senior Engineer
Davenport
Public Works
563-326-7923

The City of Davenport's Public Works Department used compost in the widening of Locust Street to help better manage storm water in the area as well as help establish turf. Locust Street was experiencing significant traffic volume as the city began expanding. Along with outdated runoff management structures, the street was beginning to worry nearby residents and city engineers. This major widening project included significant disturbance to roadsides, a common problem in transportation projects. A nearby housing subdivision also made the area very visible and in need of fast, attractive groundcover.

Locust Street widening after initial application in November 2003

The Situation

- Widening of major street made necessary by increased traffic
- Cost effective, time saving methods of restoring pedestrian walkways needed

The Problems

- Disturbance and compaction caused by total restructure
- Lack of irrigation over long term
- High visibility of project near residential area

The Answer

- Compost

Application

- One and a half-inch screened "Earth Cycle" compost from Davenport Compost Facility
- Applied prior to sod overlay to help provide organic matter and water retention
- One-mile stretch of medians, front yards and curbs of the expansion, no irrigation used
- Applied both in fall and spring

Extensive view of work along Locust Street; note the second application of compost on the left side of the street.

Results

- Provided organic matter to help establish turf and retain soil
- Decreased runoff burden on storm drains by percolating rainwater
- Promoted growth of vegetation and improved aesthetics of the area
- Established effective turf in both rural and urban settings along Locust Street

> "The city facility is always looking to use compost and we've seen good results."
>
> Tom Leabhart, Senior Engineer, Davenport Public Works

Compost Works For:

Soil Incorporant
- Turf establishment
- Garden bed preparation
- Reclamation/remediation
- Nursery production
- Roadside vegetation

Surface Applied
- Garden bed mulch
- Erosion control media

Turf Topdressing

Manufactured Topsoil

Growing Media Component
- Container/potting substrates
- Landscape (e.g. rooftop, raised planters)
- Backfill mixes (tree and shrub plantings)
- Golf course (e.g. tee, green, divot mixes)

Physical Improvement
- Improves soil structure
- Moisture management

Chemical Balance
- Modifies and stabilizes pH
- Increases cation exchange capacity

Biological Impact
- Supplies nutrients and soil biota
- Suppresses plant diseases

Other Benefits
- Binds/degrades contaminants
- Binds nutrients